

## What is claimed is:

**[Claim 1]** 1. A field effect transistor (FET) comprising:

a fin structure;  
conducting spacers positioned adjacent to said fin structure;  
an insulator adjacent to said spacers; and  
a gate layer positioned on said fin structure, said spacers, and said insulator.

**[Claim 2]** 2. The FET of claim 1, further comprising:

a substrate; and  
an isolation layer positioned over said substrate,  
wherein said isolation layer is positioned under said insulator, said spacers,  
and said fin structure.

**[Claim 3]** 3. The FET of claim 2, further comprising source/drain regions above said isolation layer.

**[Claim 4]** 4. The FET of claim 1, wherein said fin structure comprises an oxide layer over a silicon layer.

**[Claim 5]** 5. The FET of claim 1, further comprising an oxide layer adjacent to said fin structure.

**[Claim 6]** 6. The FET of claim 4, further comprising a second oxide layer over said oxide layer, wherein said second oxide layer is planar to said gate layer.

**[Claim 7]** 7. The FET of claim 1, wherein said spacers and said gate layer comprise the same material.

**[Claim 8]** 8. The FET of claim 7, wherein said material comprises polysilicon.

**[Claim 9]** 9. The FET of claim 1, further comprising a gate insulator positioned between said fin structure and said spacers.

**[Claim 10]** 10. The FET of claim 1, further comprising a second insulator adjacent to said insulator.

**[Claim 11]** 11. A field effect transistor (FET) device comprising:  
a fin structure;  
a first gate electrode adjacent to said fin structure;  
a gate insulator positioned between said first gate electrode and said fin structure;  
a second gate electrode positioned transverse to said first gate electrode;  
and  
a third gate electrode positioned on said fin structure, said first gate electrode, and said second gate electrode.

**[Claim 12]** 12. The device of claim 11, further comprising:  
a substrate; and  
an isolation layer positioned over said substrate,  
wherein said isolation layer is positioned beneath said gate insulator, said first gate electrode, and said fin structure.

**[Claim 13]** 13. The device of claim 12, wherein said isolation layer is isolated from said second gate electrode.

**[Claim 14]** 14. The device of claim 12, further comprising source/drain regions above said isolation layer.

**[Claim 15]** 15. The device of claim 11, further comprising a dielectric material sandwiching said second gate electrode.

**[Claim 16]** 16. The device of claim 11, wherein said fin structure comprises an oxide layer over a silicon layer.

**[Claim 17]** 17. The device of claim 11, further comprising an oxide layer adjacent to said fin structure.

**[Claim 18]** 18. The device of claim 16, further comprising a second oxide layer over said oxide layer, wherein said second oxide layer is planar to said third gate electrode.

**[Claim 19]** 19. The device of claim 11, wherein said first gate electrode and said third gate electrode comprise the same material.

**[Claim 20]** 20. The device of claim 19, wherein said material comprises polysilicon.

**[Claim 21]** 21. A method of lowering a gate capacitance and extrinsic resistance in a field effect transistor (FET), said method comprising:

- forming a fin structure;
- configuring a first gate electrode adjacent to said fin structure;
- disposing a gate insulator between said first gate electrode and said fin structure;

positioning a second gate electrode transverse to said first gate electrode; and

depositing a third gate electrode on said fin structure, said first gate electrode, and said second gate electrode.

[Claim 22] 22. The method of claim 21, further comprising forming an isolation layer over a substrate, wherein said isolation layer comprises a buried oxide (BOX) layer, and wherein said isolation layer is positioned beneath said gate insulator, said first gate electrode, and said fin structure.

[Claim 23] 23. The method of claim 22, further comprising configuring source/drain regions above said isolation layer.

[Claim 24] 24. The method of claim 21, further comprising sandwiching said second gate electrode with a dielectric material.

[Claim 25] 25. The method of claim 21, wherein said fin structure is formed by depositing an oxide layer over a silicon layer.

[Claim 26] 26. The method of claim 21, further comprising forming an oxide layer adjacent to said fin structure.

[Claim 27] 27. The method of claim 25, further comprising forming a second oxide layer over said oxide layer, wherein said second oxide layer is planar to said third gate electrode.

[Claim 28] 28. The method of claim 21, further comprising using the same material to form said first gate electrode and said third gate electrode.

**[Claim 29] 29.** The method of claim 28, wherein said material comprises polysilicon.